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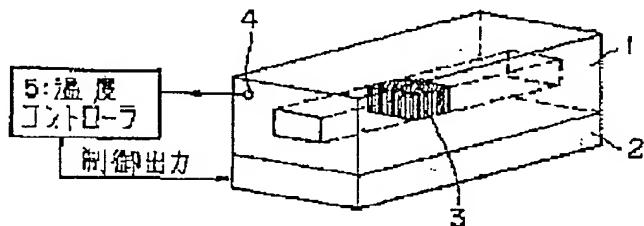
APPLICATION NUMBER : 07025428

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TITLE : THERMOSTATIC HOLDER AND
OPTICAL DEVICE USING THE SAME



ABSTRACT : PURPOSE: To obtain an optical device which has a good temp. characteristic and a thermostatic holder which has no temp. gradient and has high responsiveness by containing a hollow heat pipe and temp. control means and thermostatically holding an object in the hollow part of the hollow heat pipe.

CONSTITUTION: This thermostatic holder is composed of the square hollow heat pipe 1, a Peltier element 2 disposed to come into thermal contact with the rear surface of this pipe, a nonlinear optical element 3 fixed into the hollow heat pipe 1 in such a manner that the axial center of the hollow heat pipe aligns to the optical axis, the nonlinear optical element 3 fixed in the hollow heat pipe 1, a temp. sensor 4 mounted at the end edge of the hollow heat pipe 1 and a temp. controller 5 for controlling the supply current to the Peltier element 2 according to the output of this temp. sensor 4. The holder is constituted to emit light along the axial center of the hollow heat pipe 1 by maintaining the temp. of the nonlinear optical element 3 at a set temp. Then, the holder is maintained at a desired temp. at a high speed and since the temp. is uniform without temp. gradient, the constant temp. is maintained with high accuracy and the stable output is obtd.

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